

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-10 are presently active in this case, Claims 1, 2, 6, and 8 having been amended and Claims 9 and 10 having been added by way of the present Amendment.

The Applicant respectfully requests entry of the amendments set forth herein as they are believed to place the application into condition for allowance.

Claims 6 and 8 were indicated as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Official Action indicates that the subject matter recited in Claims 6 and 8 is not disclosed in the prior art. Accordingly, Claims 6 and 8 have been rewritten in independent form including all of the limitations of the base claims, but not the limitations of intervening Claims 5 and 7.

Since the Official Action indicates that the prior art does not disclose the limitations of Claims 6 and 8, the Applicant submits that Claims 6 and 8 are in condition for allowance.

The Applicant notes that a typographical error has been cored in Claims 6 and 8 to change “-6.7” to “-0.67” in accordance with the disclosure on page 8, line 16-18, and page 11, lines 18-20 of the specification. The Applicant submits that Claims 6 and 8 remain allowable. Newly added Claims 9 and 10 recite the features of Claims 7 and 5, respectively, and depend from Claims 8 and 6, respectively.

In the outstanding Official Action, Claims 1 and 2 were rejected under 35 U.S.C. 102(b) as being anticipated by Tanno et al. (U.S. Patent No. 6,390,594). Claims 3 and 4 were

rejected under 35 U.S.C. 103(a) as being unpatentable over Tanno et al. in view of Nozawa (U.S. Patent No. 5,128,690). Claims 5 and 7 were rejected under 35 U.S.C. 103(a) as being unpatentable over Tanno et al. in view of Nozawa and further in view of Shindo (U.S. Patent No. 6,786,566). For the reasons discussed below, the Applicant requests the withdrawal of the art rejections.

In the Office Action, the Tanno et al. reference is indicated as anticipating each of Claims 1 and 2. However, the Applicants note that a claim is anticipated only if each and every element as set forth in the claims is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). As will be demonstrated below, the Tanno et al. reference clearly does not meet each and every limitation of the amended independent Claims 1 and 2.

Claim 1 of the present application advantageously recites a maintenance method for an ink jet head which ejects ink supplied from an ink control tank via an ink supply path, as ink droplets from a plurality of orifices arranged in an orifice plate. The method comprises controlling the pressure in the ink control tank for a purging operation and for maintaining the pressure applied to the ink surface of each orifice approximately to atmospheric pressure, and sucking ink remaining in the vicinity of each orifice and on a surface of the orifice plate surrounding each orifice. Additionally, Claim 2 of the present application advantageously recites a maintenance apparatus for an ink jet head which ejects ink supplied from an ink control tank via an ink supply path, as ink droplets from a plurality of orifices arranged in an orifice plate. The apparatus comprises a pressure control section which controls the pressure

in the ink control tank for a purging operation and for maintaining the pressure applied to the ink surface of each orifice approximately to atmospheric pressure, and an ink suction section which sucks ink remaining in the vicinity of each orifice and on a surface of the orifice plate surrounding each orifice after the purging operation. The Applicant submits that the Tanno et al. reference does not disclose all of the limitations set forth above in amended Claims 1 and 2.

Amended Claim 1 recites a maintenance method for an ink jet head which ejects ink supplied from an ink control tank via an ink supply path, comprising controlling the pressure in the ink control tank for a purging operation, and amended Claim 2 recites a maintenance apparatus for an ink jet head which ejects ink supplied from an ink control tank via an ink supply path, comprising a pressure control section which controls the pressure in the ink control tank for a purging operation. By way of illustration and not limitation, the application describes an embodiment (see Figure 1) that includes a pressure control section (8) that is used to control air pressure of an air layer in an ink control tank (5). When the air pressure of the air layer is increased, this pressure is applied to a common ink chamber (1a) of an ink jet head (1) via an ink supply path (6). (See page 6, lines 18-24.)

The Tanno et al. reference does not disclose the aforementioned feature of the present invention. The Tanno et al. reference describes a configuration in which ink (Q) stored in an ink-container (10) is supplied to an ink-jetting head (50) through an ink-feeding tube (21). Figure 1 depicts the ink-container (10) as being an open reservoir. A head recovering mechanism is described as including a cap (61) having a lip portion (61d), a tube (61b), and a

bottom surface (61c). The cap (61) can be tightly-sealed against the ink-jetting head or loosely cover the ink-jetting head. A pump (80) is equipped in the midway of tube (61b) to depressurize the space between cap (61) and the nozzle plate (50b) when the cap is tightly-sealed against the ink-jetting head, and to suck air through gaps between the cap (61) and the nozzle plate (50b) when the cap is loosely covering the ink-jetting head.

Accordingly, the Tanno et al. reference does not disclose an ink jet head which ejects ink supplied from an ink control tank via an ink supply path, where pressure in the ink control tank is controlled for a purging operation, as recited in Claims 1 and 2 of the present application. To the contrary, the Tanno et al. reference depicts an ink-container (10) that is an open reservoir, and instead describes the use of a pump (80) that is equipped in the midway of tube (61b) to depressurize the space between cap (61) and the nozzle plate (50b) when the cap is tightly-sealed against the ink-jetting head, and to suck air through gaps between the cap (61) and the nozzle plate (50b) when the cap is loosely covering the ink-jetting head. The claims of the present application are clearly distinguishable from the configuration described and depicted in the Tanno et al. reference.

Thus, the Applicant submits that the Tanno et al. reference does not disclose all of the limitations recited in Claims 1 and 2 of the present application, and the Applicant respectfully requests the withdrawal of the anticipation rejection of Claims 1 and 2.

Claims 3-5 and 7 are considered allowable for the reasons advanced for Claims 1 and 2 from which they depend. These claims are further considered allowable as they recite other

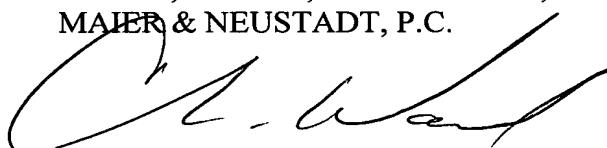
Application Serial No.: 10/600,434  
Reply to Office Action dated January 13, 2005

features of the invention that are neither disclosed nor suggested by the applied references when those features are considered within the context of Claims 1 and 2.

Consequently, in view of the above discussion, it is respectfully submitted that the present application is in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully Submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.



Gregory J. Maier  
Registration No. 25,599  
Attorney of Record

Christopher D. Ward  
Registration No. 41,367

Customer Number

**22850**

Tel. (703) 413-3000  
Fax. (703) 413-2220  
(OSMMN 10/01)

GJM:CDW:brf  
I:\atty\cdw\239465US3\am2.doc